

Application No. 10/766,939  
 Reply to Office Action dated May 16, 2006

Attorney Docket No. FS-F03228-01

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of the Claims:**

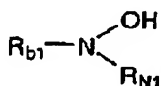
1. (Currently amended): An image forming method comprising:  
 image-wise exposing to a radiation source a photothermographic material comprising, on a same surface of a support, a photosensitive silver halide having a silver iodide content of 40 to 100 mol%, a non-photosensitive organic silver salt, a reducing agent, a binder, and an adsorbable redox compound represented by Formula (I), wherein, in Formula (I), A represents a group that can be adsorbed by silver halide; W represents a divalent connecting group; n represents 0 or 1; B represents a reducing group that is capable of reducing silver ions and is a residue derived from a compound represented by any one of Formulas B<sub>1</sub> to B<sub>5</sub> and Formula B<sub>13</sub>; and  
 thermally developing the image-wise exposed photothermographic material with a developing time of 1 to 12 seconds;  
 wherein in Formulas B<sub>1</sub> to B<sub>5</sub> and in Formula B<sub>13</sub>, R<sub>b1</sub>, R<sub>b2</sub>, R<sub>b3</sub>, R<sub>b4</sub>, R<sub>b5</sub>, R<sub>b13</sub>, R<sub>N1</sub>, R<sub>N2</sub>, R<sub>N3</sub>, R<sub>N4</sub> and R<sub>N5</sub> each independently represent a hydrogen atom, an alkyl group, an aryl group or a heterocyclic group; R<sub>H3</sub>, R<sub>H5</sub>, R'<sub>H5</sub>, and R<sub>H13</sub> each independently represent a hydrogen atom, an alkyl group, an aryl group, an acyl group, an alkylsulfonyl group or an arylsulfonyl group, in which R<sub>H3</sub> may alternatively represent a hydroxy group; R<sub>b130</sub> to R<sub>b133</sub> each independently represent a hydrogen atom or a substituent; and m<sub>5</sub> represents 0 or 1;

Formula (I)     A-(W)<sub>n</sub>-B

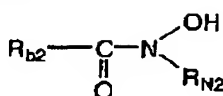
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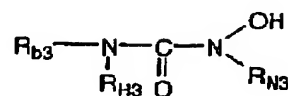
(B<sub>1</sub>)



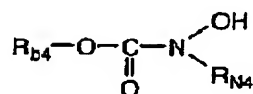
(B<sub>2</sub>)



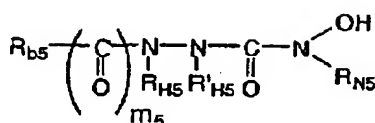
(B<sub>3</sub>)



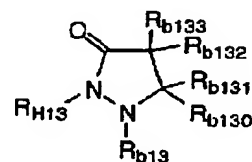
(B<sub>4</sub>)



(B<sub>5</sub>)



(B<sub>13</sub>)



wherein the photothermographic material further includes a compound represented by the following formula (H):



wherein in formula (H), Q represents an alkyl group, an aryl group or a heterocyclic group; Y represents a divalent connecting group; n represents 0 or 1; Z<sub>1</sub> and Z<sub>2</sub> each independently represent a halogen atom; and X represents a hydrogen atom or an electron attracting group.

2. (Original): The image forming method according to claim 1, wherein the developing time is 2 to 10 seconds.

3. (Original): The image forming method according to claim 1, wherein the thermal development is conducted at a temperature of 80 to 250 °C.

4. (Original): The image forming method according to claim 1, wherein the thermal development is conducted at a temperature of 100 to 140 °C.

5. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes an antifogging agent.

6. (Original): The image forming method according to claim 1, wherein the photosensitive silver halide has an average grain size of 5 to 50 nm.

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7. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a development accelerator.

8. (Cancelled.)

9. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a toning agent.

10. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a ultra-high contrast agent.

11. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a matting agent.

12. (Currently amended): The image forming method according to claim 1, wherein the radiation source is ~~was~~ a laser.

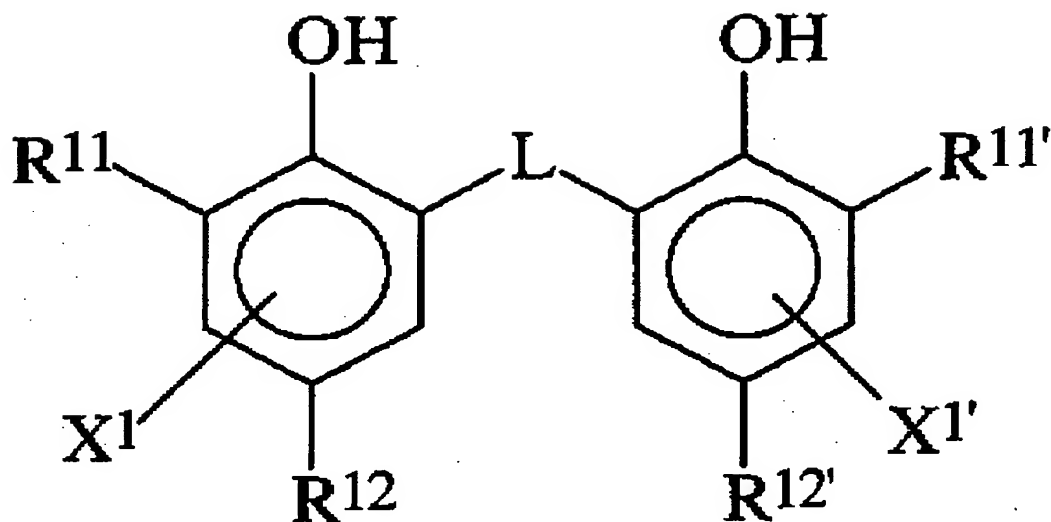
13. (Currently amended): The image forming method according to claim 12 ~~1~~, wherein the laser has a light emission peak intensity within a wavelength range of 350 to 450 nm.

14. (Original): The image forming method according to claim 1, wherein the reducing agent is a compound represented by the following formula (R-1):

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Formula (R-1)



wherein in formula (R-1), R<sup>11</sup> and R<sup>11'</sup> each independently represent an alkyl group having 1 to 20 carbon atoms; R<sup>12</sup> and R<sup>12'</sup> each independently represent an alkyl group having 2 to 20 carbon atoms; L represents a -S- group or a -CHR<sup>13</sup>- group; R<sup>13</sup> represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; X<sup>1</sup> and X<sup>1'</sup> each independently represent a hydrogen atom or a group that can substitute a benzene ring.

Claims 15-20 (Cancelled.)

21. (Previously presented): The method of claim 1 wherein the silver halide has a silver iodide content of 80 to 100 mol%.

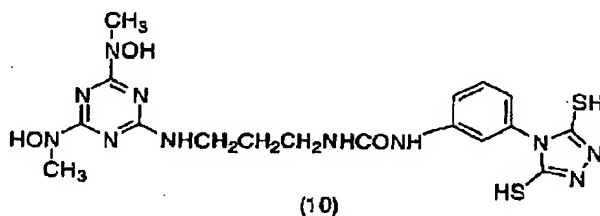
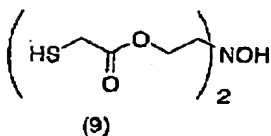
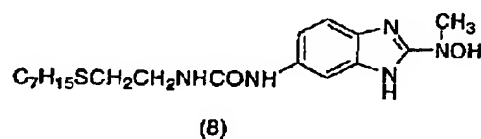
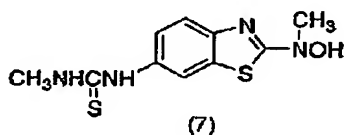
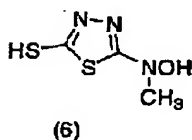
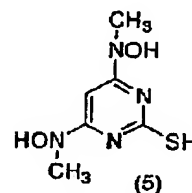
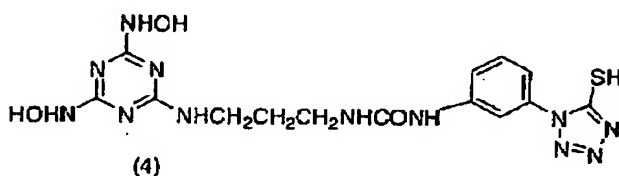
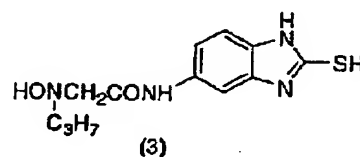
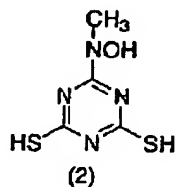
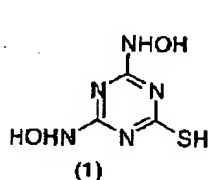
22. (Previously presented): The method of claim 1 wherein the silver halide has a silver iodide content of 90 to 100 mol%.

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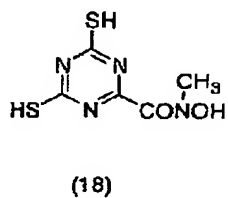
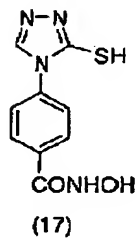
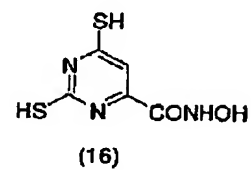
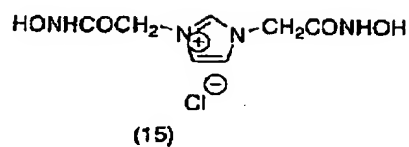
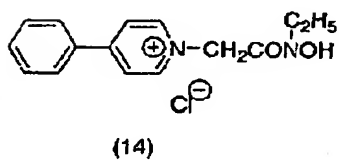
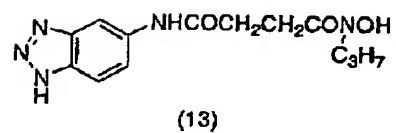
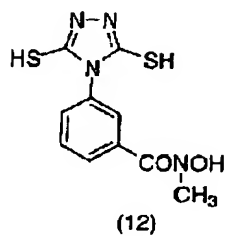
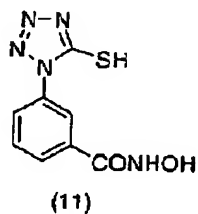
23. (Previously presented): The method of claim 1, wherein an adsorbable group represented by A is a mercapto group, a salt thereof, a thion group ( $-C(=S)-$ ), a heterocyclic group containing at least an atom selected from a nitrogen atom, a sulfur atom, a selenium atom and a tellurium atom, a sulfide group, a disulfide group, a cationic group, or an ethynyl group.

24. (Previously presented): The method of claim 1, wherein the adsorbable redox compound is represented by any of the following formulas (1) to (38) and (71) to (81):



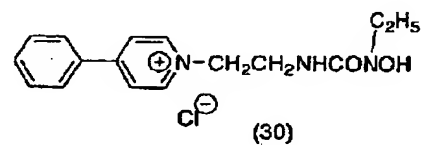
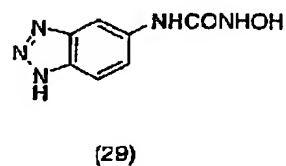
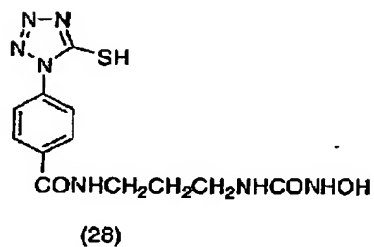
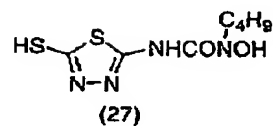
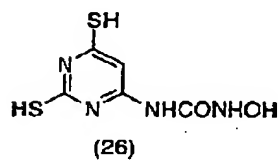
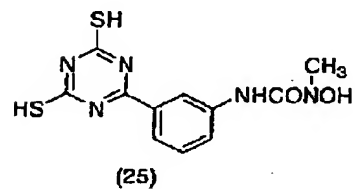
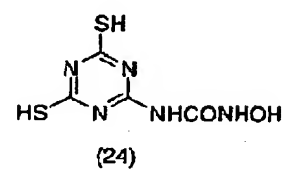
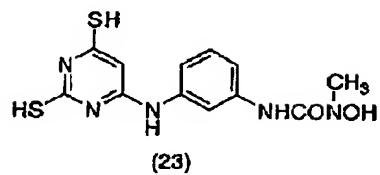
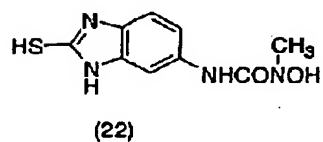
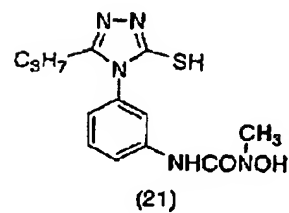
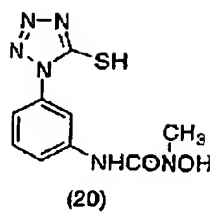
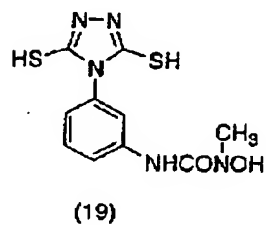
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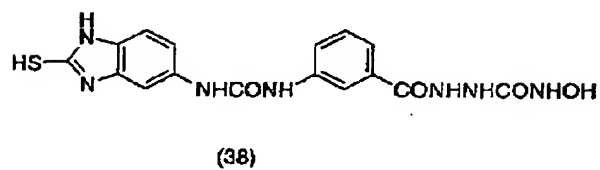
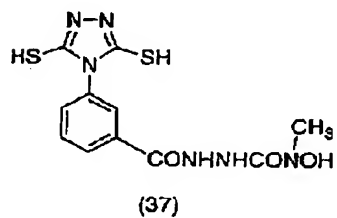
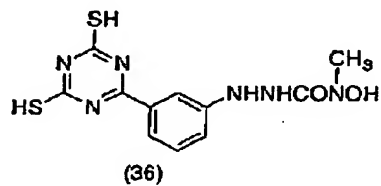
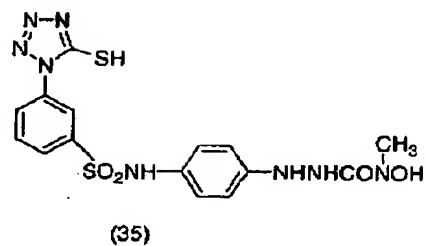
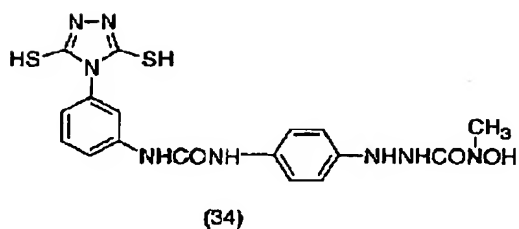
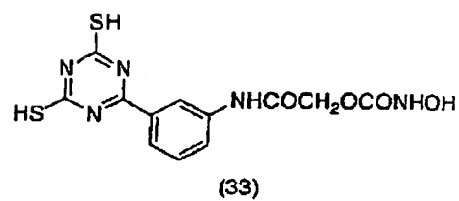
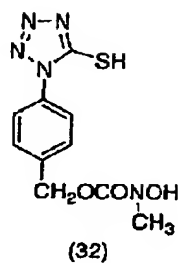
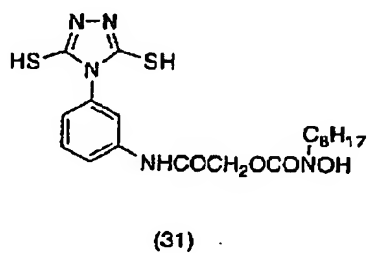
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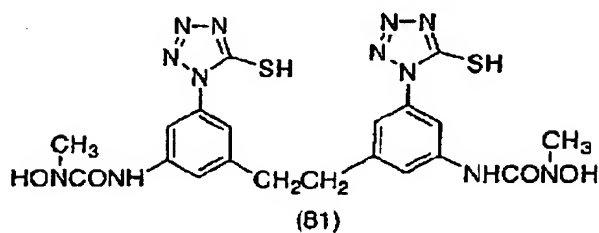
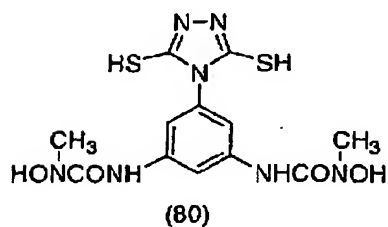
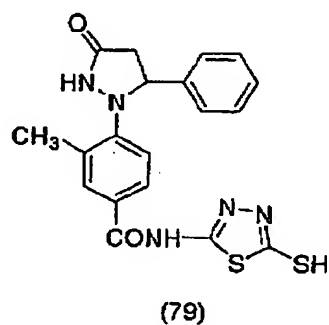
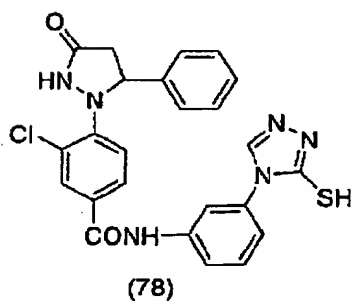
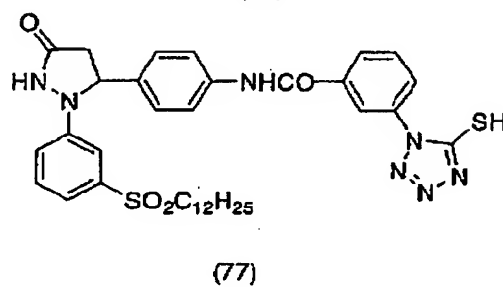
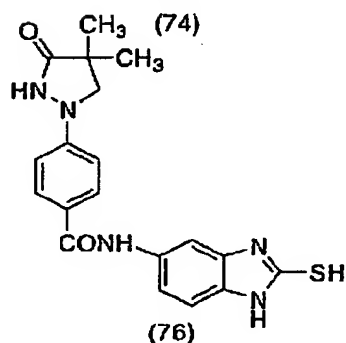
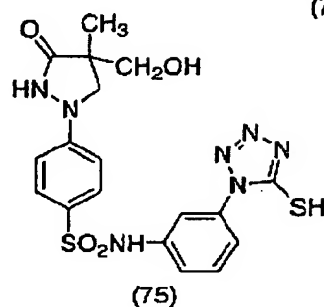
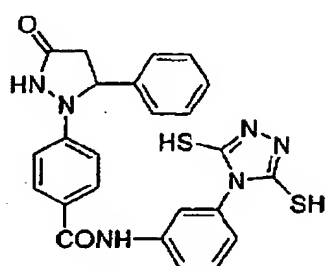
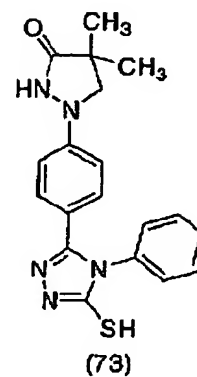
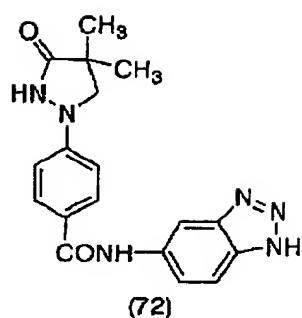
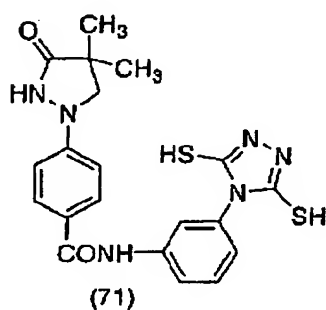
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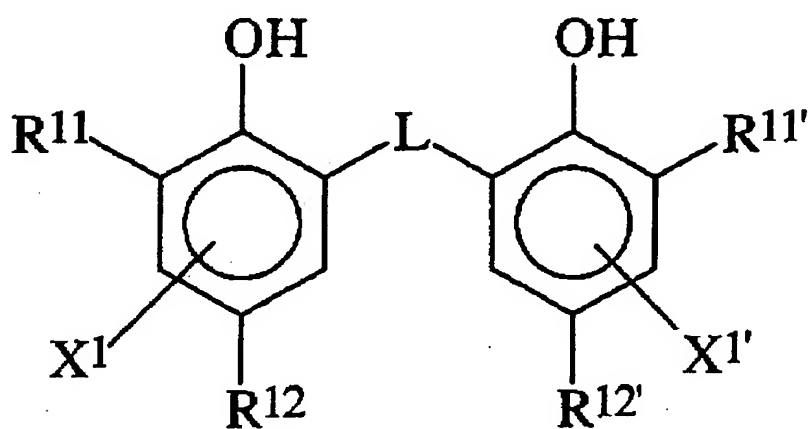


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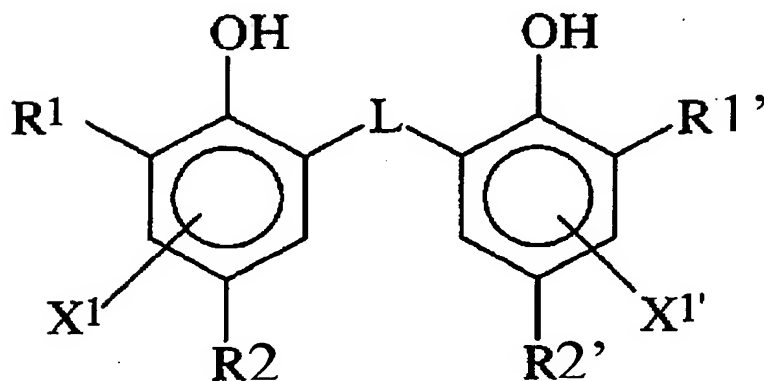
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25. (Previously presented): The method of claim 1, wherein the reducing agent is at least one compound selected from the group consisting of Formula (R-1) and Formula (R-2):

Formula (R-1)



Formula (R-2)



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wherein in formula (R-1),  $R^{11}$  and  $R^{11'}$  each independently represent an alkyl group having 1 to 20 carbon atoms;  $R^{12}$  and  $R^{12'}$  each independently represent an alkyl group having 2 to 20 carbon atoms; L represents a -S- group or a -CHR<sup>13</sup>- group;  $R^{13}$  represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms;  $X^1$  and  $X^{1'}$  each independently represent a hydrogen atom or a group that can substitute a benzene ring; and wherein

in formula (R-2),  $R^1$  and  $R^{1'}$  each independently represent an alkyl group having 3 to 20 carbon atoms and including a secondary or tertiary carbon atom bonded to the benzene ring;  $R^2$  and  $R^{2'}$  each independently represent a methyl group; L represents -S- or -CHR<sup>3</sup>-;  $R^3$  represents a hydrogen atom or an alkyl group with 1 to 20 carbon atoms; and  $X^1$  and  $X^{1'}$  each independently represent a hydrogen atom or a group that can substitute the benzene ring.

26. (Previously presented): The method of claim 1, wherein the photothermographic material further comprises a compound represented by the following formula (H):



wherein in formula (H), X is a bromine atom; Y is SO<sub>2</sub>; N is 1; and Q is an aryl group or a heterocyclic group.